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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/810,304

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Radhakrishnan Subramaniam

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EXAMINER

PIERY, MICHAEL T

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/810,304	Applicant(s) SUBRAMANIAM ET AL.	
	Examiner MICHAEL T. PIERY	Art Unit 1791	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 May 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-15 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

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DETAILED ACTION

Double Patenting

1. A rejection based on double patenting of the "same invention" type finds its support in the language of 35 U.S.C. 101 which states that "whoever invents or discovers any new and useful process ... may obtain a patent therefor ..." (Emphasis added). Thus, the term "same invention," in this context, means an invention drawn to identical subject matter. See *Miller v. Eagle Mfg. Co.*, 151 U.S. 186 (1894); *In re Ockert*, 245 F.2d 467, 114 USPQ 330 (CCPA 1957); and *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970).

A statutory type (35 U.S.C. 101) double patenting rejection can be overcome by canceling or amending the conflicting claims so they are no longer coextensive in scope. The filing of a terminal disclaimer cannot overcome a double patenting rejection based upon 35 U.S.C. 101.

Claim 1 is rejected under 35 U.S.C. 101 as claiming the same invention as that of claim 10 of prior U.S. Patent No. 6,991,759. This is a double patenting rejection.

2. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

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3. Claims 2-15 rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-14 of U.S. Patent No. 6,991,759. Although the conflicting claims are not identical, they are not patentably distinct from each other both claim a process for the preparation of semi-conducting polymer film containing a beta crystalline phase of polyvinylidene fluoride, the process comprising: forming a solution by dissolving polyvinylidene fluoride in a solvent, dispersing conducting particles therein, casting the dispersed solution on a substrate, evaporating the solvent, drying the film, holding the film between two metal plates and applying an electric potential thereto, and removing the film to obtain a polymer film containing high beta crystalline phase of polyvinylidene fluoride. Claims 1-9 and 11-14 of '759 do not claim the applying the electric potential for a duration of 10 to 300 min. However, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the process of '759 to include the claimed electric potential duration range since it has been held that when the general conditions for have claim have been disclosed, finding the optimal workable ranges involves only routine skill in the art.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

5. Claims 1-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Krueger et al. (US 4,606,871) in view of Service (US 6,932,921) also in view of Murayama (US 3,885,301).

Regarding claim 1, Krueger teaches dissolving a PVDF in a solvent (Column 2, lines 40-43), casting the solution of a substrate (Column 2, line 44), evaporating the solvent and drying the film (Column 54-60), conditioning the film by applying electric potential (Column 3, lines 10-12) for 60 minutes (Column 7, lines 1-5) and removing the film to give a film with high beta crystalline phase of PVDF (Column 3, lines 18-20). Service teaches a method of producing PVDF films including a step of dispersing conductive particles in the solution (Column 4, lines 7-10). Service further teaches these fluoropolymer films containing conductive polymers are

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useful in many applications such as semiconductor production. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the process of Krueger to include conductive particles because fluoropolymer films with conductive particles are desirable in many industrial applications (Column 1, lines 50-60 of Service). Krueger provides non-limiting exemplary methods of conditioning pyroelectric films using electric potential (Column 3, lines 10-18). Murayama teaches it is well-known to condition pyroelectric films by applying electric potential using two metal plates (Column 3, lines 15-25). It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the process of Krueger to use two metal plates to condition the film because it has been held that substitution of known equivalents is within routine skill of one in the art.

Regarding claim 2, Krueger teaches using Kynar 301 as the PVDF (Column 3, line 45).

Regarding claim 3, Krueger teaches using DMF (dielectric constant of 39) as the solvent (Column 3, line 49).

Regarding claim 4, Service teaches dimethyl acetamide is a suitable solvent for polymer dispersion (Column 4, line 60).

Regarding claim 5, Service teaches the conducting particles are polyaniline (Column 6, line 3). Example 1 describes grinding the conductive polymer before dispersing into the solvent. It is interpreted by the examiner that the grinding produces a powder.

Regarding claims 6 and 13, the modified Krueger reference does not explicitly teach a particle size. However, Service does teach the particles are ground (Column 8, lines 27-28). It would have been obvious to one of ordinary skill in the art at the time of the invention use the claimed particle size since it has been held that when the general conditions of a claim are

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disclosed, finding the optimum workable range involves only routine skill in the art. Service teaches the conductive particles have a concentration of 2-30% (Example 1).

Regarding claim 7, Kruger teaches using polyaniline particles (Column 6, line 3).

Regarding claim 8, Service teaches casting the film on steel (Column 4, line 33) and teaches all processing steps are at a temperature less than 225 degrees C (Column 2, lines 40-44).

Regarding claim 9, Murayama teaches providing 30 kv/cm of current. Using the disclosed thickness in Example 3 (25 microns), the voltage applied is 75V.

Regarding claims 10 and 11, Murayama teaches various conditioning temperatures between 40 and 100 degrees C (Figure 6).

Regarding claim 12, Kruger teaches spin coating the substrate (Column 2, line 43) and Murayama teaches applying electrodes to both sides of the film (Figure 3, 6 and 6').

Regarding claim 14, Service teaches the conducting particle composition is less than 25% (Column 3, line 67).

Regarding claim 15, Kruger teaches applying voltage for 60 min (Column 7, lines 1-5).

Response to Arguments

Applicant's arguments filed May 6, 2008, with respect to the rejection(s) of claim(s) 1-15 have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made, as discussed above.

Applicant argues that the claimed invention is not identical in scope with the claims of the '759 patent. This argument is not persuasive. Claim 10 of the '759 patent includes all the same limitations of claim 1 and is therefore identical in scope.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MICHAEL T. PIERY whose telephone number is (571)270-5047. The examiner can normally be reached on M-Th 7:30-6.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Christina Johnson can be reached on (571) 272-1176. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Michael T Piery/
Examiner, Art Unit 1791

/Christina Johnson/

Supervisory Patent Examiner, Art Unit 1791